Mr. Mike Wilfert
Plumrose USA, Inc.
P.O. Box 160
Elkhart, Indiana 46515

Dear Mr. Wilfert:

Re: Exempt Construction and Operation Status,
039-12939-00352

The application from Plumrose USA, Inc., received on November 8, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following meat packing and processing facility, to be located at 24402 County Road 45, Elkhart, Indiana, is classified as exempt from air pollution permit requirements. This approval also supercedes the existing CP039-4857-00352, issued on April 26, 1996.

(a) Five (5) smokehouses, identified as SH-1 through SH-5, with a maximum throughput of 80 pounds of sawdust per 16 hours, and exhausting through stacks S-1 through S-5, respectively.

(b) One (1) natural gas fired boiler, identified as Boiler 1, with a maximum heat input capacity of 0.0138 million British thermal units per hour (MMBtu/hr);

(c) One (1) natural gas fired boiler, identified as Boiler 2, with a maximum heat input capacity of 0.0086 MMBtu/hr; and

(d) One (1) parts degreaser with a maximum capacity of 35 gallons.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(2) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) the natural gas fired boilers (Boiler 1 and Boiler 2), rated at 0.0138 MMBtu per hour and 0.0086 MMBtu per hour, respectively, are subject to the particulate matter limitations of 326 IAC 6-2. Pursuant to this rule, the boilers are limited to 0.6 pounds per hour PM emissions for a heat input less than 10 MMBtu/hr.

(3) Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the five smokehouses shall be limited to 0.551 pounds per hour because the combined process weight rate is less than 100 pounds per hour.

(4) Pursuant to 326 IAC 8-3-2 (Cold cleaner operation) the owner or operator of a cold cleaning

facility shall:

(1) equip the cleaner with a cover;

(2) equip the cleaner with a facility for draining cleaned parts;

(3) close the degreaser cover whenever parts are not being handled in the cleaner;

(4) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) provide a permanent, conspicuous label summarizing the operating requirements;

(6) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

(5) Pursuant to 326 IAC 8-3-5 (Cold Cleaner Degreasing Operation and Control) the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can easily operated with one (1) hand if:

(A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

(B) the solvent is agitated; or

(C) the solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) The owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

LMW/EVP

cc: File - Elkhart County
Elkhart County Health Department
Air Compliance - Greg Wingstrom
Northern Regional Office
Permit Tracking - Janet Mobley
Air Programs Section- Michelle Boner

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name: **Plumrose USA, Inc.**
Source Location: **24402 County Road 45, Elkhart, Indiana 46515**
County: **Elkhart**
SIC Code: **2011**
Operation Permit No.: **039-12939-00352**
Permit Reviewer: **Lisa M. Wasiowich/EVP**

The Office of Air Quality (OAQ) has reviewed an application from Plumrose USA, Inc. relating to the operation of a meat packing and processing facility.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Five (5) smokehouses, identified as SH-1 through SH-5, with a maximum throughput of 80 pounds of sawdust per 16 hours, and exhausting through stacks S-1 through S-5, respectively.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted facilities/units:

(a) One (1) natural gas fired boiler, identified as Boiler 1, with a maximum heat input capacity of 0.0138 million British thermal units per hour (MMBtu/hr);

(b) One (1) natural gas fired boiler, identified as Boiler 2, with a maximum heat input capacity of 0.0086 MMBtu/hr; and

(c) One (1) parts degreaser with a maximum capacity of 35 gallons.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) CP 039-4857-00352, issued on April 26, 1996.

The emissions from the source were re-evaluated using the latest emission factors for meat smokehouses approved by U.S. EPA and listed in AP-42, Section 9.5.2. Based on the re-calculated emissions, and pursuant to 2-1.1-3, the source is determined to be exempt of the permitting requirements. This exemption shall supercede the existing CP 039-4857-00352.

Enforcement Issue

There are no enforcement actions pending because the potential to emit of all regulated air pollutants is of exemption level for all unpermitted facilities, and they are therefore not subject to enforcement actions.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on November 8, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 6.)

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	1.26
PM-10	2.90
SO_2	0.00
VOC	3.51
CO	0.01
NO_x	0.01

HAP's	Potential To Emit (tons/year)
Ethyl Benzene	0.01
Methyl Chloroform	0.01
Naptha	0.93
Perchloroethylene	0.01
Toluene	0.01
Xylene	0.01
TOTAL	0.98

(a) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Elkhart County has been classified as attainment or unclassifiable for PM-10, SO_2, Ozone, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

The total emissions indicated in this Exemption 039-12939-00352, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

(a) Boiler 1 and Boiler 2 are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because they each have a maximum design heat input capacity less than 10 million British thermal units per hour.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 61) applicable to this source.

(c) The parts degreaser is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart T because it does not use any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform or any combination of these halogenated HAP solvents in a total concentration greater than 5 percent by weight.

State Rule Applicability - Entire Source

326 IAC 2-4.1-1 (New Source Toxics Control)

This source is not subject to 326 IAC 2-4.1-1 (New Source Toxics Control) because the source has PTE of any HAP less than 10 tons per year and PTE of any combination of HAPs less than 25 tons per year. Therefore, 326 IAC 2-4.1-1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is located in Elkhart County and the potential to emit VOC and NO_X is less than ten (10) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The natural gas fired boilers (Boiler 1 and Boiler 2), rated at 0.0138 MMBtu per hour and 0.0086 MMBtu per hour, respectively, are subject to the particulate matter limitations of 326 IAC 6-2. Pursuant to this rule, the boilers are limited by the following equation from 326 IAC 6-2-4 because they were constructed after 1996:

$Pt = 1.09/Q^{0.26} = 1.09/(0.0224)^{0.26} = 2.93$ lb/ MMBtu

where: Pt = maximum allowable particulate matter (PM) emitted per MMBtu heat input
Q = total source max. indirect heater input = 0.0224 MMBtu/hr

For Q less than 10 MMBtu/hr, Pt shall not exceed 0.6.

Therefore, the PM emissions from both boilers is limited to 0.6 lbs PM/MMBtu

Compliance calculation:
(0.0002 tons PM/yr) * (hr/0.0224 MMBtu) * (yr/8,760 hrs) * (2,000 lbs/ton) = 2.0E-3 lbs PM/MMBtu

Actual lbs PM/MMBtu (2.7E-3) is less than allowable lbs PM/MMBtu (0.6), therefore the boilers will comply with the requirements of 326 IAC 6-4.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the five smokehouses shall be limited to 0.551 pounds per hour because the combined process weight rate is less than 100 pounds per hour.

326 IAC 8-3-2 (Cold cleaner operation)

The owner or operator of a cold cleaning facility shall:

(1) equip the cleaner with a cover;

(2) equip the cleaner with a facility for draining cleaned parts;

(3) close the degreaser cover whenever parts are not being handled in the cleaner;

(4) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) provide a permanent, conspicuous label summarizing the operating requirements;

(6) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreasing Operation and Control)

(a) Pursuant to 326 IAC 8-3-5 (Cold Cleaner Degreasing Operation and Control) the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can easily operated with one (1) hand if:

(A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

(B) the solvent is agitated; or

(C) the solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) The owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Conclusion

The operation of this meat packing and processing facility shall be subject to the conditions of the attached proposed **Exemption 039-12939-00352.**

Appendix A: Emission Calculations

Company Name: Plumrose USA, Inc.
Address City IN Zip: 24402 County Road 45, Elkhart Indiana 46515
CP: 039-12939
Plt ID: 039-00352
Reviewer: Lisa M. Wasiowich
Date: January 5, 2001

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Combustion	Smokehouse Emissions	Degreasing Emissions	**TOTAL**
PM	0.00	1.26	0.00	1.26
PM10	0.00	2.90	0.00	2.90
SO2	0.00	0.00	0.00	0.00
NOx	0.01	0.00	0.00	0.01
VOC	0.00	2.41	1.10	3.51
CO	0.01	0.00	0.00	0.01
total HAPs	0.00	0.00	0.98	0.98
worst case single HAP	0.00	0.00	0.93	0.93
			naptha	

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Combustion	Smokehouse Emissions	Degreasing Emissions	**TOTAL**
PM	0.00	1.26	0.00	1.26
PM10	0.00	2.90	0.00	2.90
SO2	0.00	0.00	0.00	0.00
NOx	0.01	0.00	0.00	0.01
VOC	0.00	2.41	1.10	3.51
CO	0.01	0.00	0.00	0.01
total HAPs	0.00	0.00	0.98	0.98
worst case single HAP	0.00	0.00	0.93	0.93

Total emissions based on rated capacity at 8,760 hours/year, after control.

Appendix A: Emissions Calculations
Smokehouse Emissions

Company Name: Plumrose USA, Inc.
Address City IN Zip: 24402 County Road 45, Elkhart Indiana 46515
CP: 039-12939
Plt ID: 039-00352
Reviewer: Lisa M. Wasiowich
Date: January 5, 2001

Total Maximum Throughput
lbs/hr

25.0

Total Maximum Throughput includes five (5) smokehouses each with a maximum throuput of 80 pounds of sawdust in 16 hours.

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/ton sawdust	23.0	53.0	0.0	0.0	44.0	0.0
Potential Emission in tons/yr	1.26	2.90	0.00	0.00	2.41	0.00

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

Methodology

Emission (tons/yr) = (Throughput (lbs/hr)/2000 (lbs/ton)) x Emission Factor (lb/ton) x 8760 (hr/yr) /2,000 lb/ton
Emission factors obtained from AP-42 Section 9.5.2 (last updated 9/95)

Appendix A: Emissions Calculations
VOC and Particulate
From Degreasing Operations

Company Name: Plumrose USA, Inc.
Address City IN Zip: 24402 County Road 45, Elkhart Indiana 46515
CP: 039-12939
Plt ID: 039-00352
Reviewer: Lisa M. Wasiowich
Date: January 5, 2001

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/day)	Maximum (days/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	Transfer Efficiency
Safety Kleen 105	6.7	100.00%	0.0%	100.0%	0.0%	0.00%	0.60000	0.063	6.70	6.70	0.25	6.03	1.10	0.00	100%
State Potential Emissions			**Add worst case coating to all solvents**								**0.25**	**6.03**	**1.10**	**0.00**	

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Plumrose USA, Inc.
Address City IN Zip: 24402 County Road 45, Elkhart Indiana 46515
CP#: 039-12939
Plt ID: 039-00352
Permit Reviewer: Lisa M. Wasiowich
Date: January 5, 2001

Material	Density (Lb/Gal)	Gallons of Material (gal/day)	Maximum (days/hour)	Weight % Naptha	Weight % Xylene	Weight % Ethyl Benzene	Weight % Toluene	Weight % Methyl Chloroform	Weight % Perchloroethylene	Naptha Emissions (ton/yr)	Xylene Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Methyl Chloroform Emissions (ton/yr)	Perchloroethylene Emissions (ton/yr)
Safety Kleen 105	6.67	0.600000	0.06	85.00%	1.00%	0.50%	0.50%	0.50%	0.50%	0.93	0.01	0.01	0.01	0.01	0.01
Total State Potential Emissions										**0.93**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: Plumrose USA, Inc.
Address City IN Zip: 24402 County Road 45, Elkhart Indiana 46515
CP: 039-12939
Plt ID: 039-00352
Reviewer: Lisa M. Wasiowich
Date: January 5, 2001

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.0224	0.20

Total heat input capacity includes Boiler 1 with a maximum heat input capacity of 0.0138 MMBtu/hr and Boiler 2 with a maximum heat input capacity of 0.0086 MMBtu/hr.

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0002	0.00	0.00	0.01	0.00	0.01

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: Plumrose USA, Inc.
Address City IN Zip: 24402 County Road 45, Elkhart Indiana 46515
CP: 039-12939
Plt ID: 039-00352
Reviewer: Lisa M. Wasiowich
Date: January 5, 2001

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.060E-07	1.177E-07	7.358E-06	1.766E-04	3.336E-07

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.906E-08	1.079E-07	1.374E-07	3.728E-08	2.060E-07

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.